

C
610.152
RAD

**GONADAL DOSE OF RADIATION IN PATIENTS
UNDERGOING CHEST RADIOGRAPHY**

A PROJECT REPORT PRESENTED BY

A.W.M.R.N.K RATWATTE

to the Board of Study in Physics of the
POSTGRADUATE INSTITUTE OF SCIENCE

*in partial fulfillment of the requirement
for the award of the degree of*

MASTER OF SCIENCE IN MEDICAL PHYSICS

of the

**UNIVERSITY OF PERADENIYA
SRI LANKA
2007**

616282

GONADAL DOSE OF RADIATION IN PATIENTS UNDERGOING CHEST RADIOGRAPHY

A.W.M.R.N.K. Ratwatte
Post Graduate Institute of Science
University of peradeniya
peradeniya
Sri Lanka.

In Sri Lanka chest radiography is the most commonly performed radiographic examination. Everyday a very large number of populations is subjected to chest radiography to find lot of details about diseases as well as bone fractures. It is considered to be all ionizing radiation is harmful. This project deals with x rays. Therefore x radiation is also harmful. According to the beam strength of the x ray beam which is used for chest radiography a small amount of the dose can be deposited inside the patient's body and x rays can be scattered into many directions. This radiation including scatter radiation increases patient dose inside radiosensitive organs like gonads i.e. ovaries and testes. Since they carry genetic information generation by generation they are very important. Therefore my work is to determine the gonadal dose in patient's undergoing chest radiography. To find the gonadal dose ionizing chamber dosimetry system was used and the radiation was measured in mGy. The sample size is hundred out of a huge population of people. At the end of the practical hundred readings were obtained. By analyzing the data which I have obtained from the practical it can be concluded that a very low dose of radiation varies from 0.2-16.0 μ Gy are incident on gonads during chest radiography. When it compared with the Entrance surface dose i.e. 0.4 mGy this set of readings contains very low values. Therefore radiation effects on gonads are negligible.